

## ABSTRACT

The present invention provides a method and apparatus for applying a uniformly-distributed pattern of stripes (8) on a component (6) of a large rotary machinery, such as an industrial generator. A method is provided that comprises measuring the circumferential area of the component (6) with a measuring element (14). The precise circumference is indicated and a desired number of pattern segments is determined. The circumference is divided by this number to produce equally spaced segments. This is then transferred to the rotor shaft (6) by marking on the measuring element (12) the number of segments and making a copy of the markings onto a second strip (14). These strips are then aligned on the circumferential area and cross strips (22) are placed at each of the segment marks (16). The segment areas not covered by the cross strips (24) are then painted in a color that is optically distinguishable from the non-painted regions. An optical probe (2) is then able to scan the stripes to detect torsional forces in the rotor shaft.